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09/681,913	06/26/2001	Terry A. Troia	57761.000084	5110

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HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

EXAMINER

TANG, KENNETH

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/681,913

Applicant(s)

TROIA ET AL.

Examiner

Kenneth Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is in response to the Amendment on 11/2/04. Applicant's arguments have been fully considered but were not found to be persuasive.
2. Claims 1-37 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-17 and 35-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - a. In claim 1, "determining loading of the operating system based on the user interface" is indefinite because it does not make sense that the loading of the operating system be based on the user interface. The Applicant clarifies that the determination is made by the user who looks at the interface, but the claim language does not necessarily reflect that.
 - b. Claims 13, 35, and 37 are rejected for the same reasons as stated in the rejection of claim 1.
4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. There is no structural

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relationship between the “processing time using a system of charts” (in claim 3) and the monitoring, scheduling, or adjusting of tasks (in claim 1).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 18, 20, 21, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (hereinafter Lee) (US 6,263,358 B1).

6. As to claim 1, Lee teaches a method of monitoring and scheduling tasks in an operating system (*col. 7, lines 30-45*), the method comprising the steps of:

obtaining task information relating to tasks processed in the operating system (*col. 7, lines 29-35*), generating a user interface based on the obtained task information (*col. 22, lines 8-13 and col. 7, lines 35-40*), the user interface displaying parameters related to the task information (*col. 7, lines 30-40*), determining loading of the operating system based on the user interface (*col. 7, lines 30-35*), and adjusting the scheduling of tasks based on the loading of the operating system (*col. 7, lines 38-45*).

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7. As to claim 2, Lee teaches wherein the operating system includes a tool and a controller, and the tasks are processed in the controller and the user interface is generated by the tool (*col. 1, lines 47-58, col. 34, lines 53-67*).
8. As to claim 18, it is rejected for the same reasons as stated in the rejection of claim 1.
9. As to claim 20, it is rejected for the same reasons as stated in the rejection of claim 2.
10. As to claim 21, Lee teaches wherein the controller device and the control systems tool are connected to each other over a communications network (*col. 6, lines 17-18*).
11. As to claim 35, it is rejected for the same reasons as stated in the rejection of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 3-17, 19, 22-34, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (hereinafter Lee) (US 6,263,358 B1) in view of Dentler et al. (hereinafter Dentler) (US 6,289,368 B1).**

13. As to claim 3, Lee teaches using a plurality of graphs for coordination (*col. 9, lines 45-48*) but Lee fails to explicitly teach representing processing time using a system of charts.

However, Dentler teaches using a system of charts to represent processing time of tasks (*see Abstract*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a system of charts to represent processing time in order to graphically display the status and other information of the processes (*see Abstract*).

14. As to claim 4, Dentler teaches wherein the system of charts includes a plurality of charts (*see Abstract*).

15. As to claim 5, Lee and Dentler teach having an indefinite amount of graphs and charts, but Lee in view of Dentler fails to explicitly teach that each chart having 8 time slices apart from each other. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of having charts with 8 time slices apart from each other because it is a design choice to programmer, and the system would still be able to operate normally with a different chosen number of time slices.

16. As to claim 6, it is rejected for the same reasons as stated in the rejection of claim 5. In addition, Lee teaches adjusting the scheduling of tasks (*col. 7, lines 38-45*).

17. As to claim 7, it is rejected for the same reasons as stated in the rejection of claim 6.

18. As to claim 8, it is rejected for the same reasons as stated in the rejection of claim 5. In addition, Lee in view of Dentler fails to explicitly teach the moving a task from different charts consist of skewing of the task. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of the moving a task from different charts consist of skewing of the task because by definition skewing the task involves moving the task.

19. As to claim 9, it is rejected for the same reasons as stated in the rejection of claim 5. In addition, Dentler teaches generating profiles of the charts (*see Abstract*).

20. As to claim 10, Lee in view of Dentler fails to explicitly teach wherein the profile for each of the eight time slices in each chart includes at least one selected from the group consisting of number of tasks in the time slice, overruns, and execution time for each chart. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of at least one selected from the group consisting of number of tasks in the time slice, overruns, and execution time for each chart in order to ensure that each will be profiled.

21. As to claim 11, Dentler teaches wherein the method further includes the steps of: selecting a time slice within one of the plurality of charts, and generating a detailed profile of that selected time slice (*see Abstract and col. 3, lines 25-40*).

22. As to claim 12, Dentler teaches wherein the detailed profile includes at least one selected from the group consisting of execution order of a task, scheduled rate, last run time, minimum run time and maximum run time (*for example, see Fig. 11*).

23. As to claim 13, Lee teaches a method of monitoring and scheduling tasks in an operating system, the method comprising the steps of:
obtaining task information relating to tasks processed in the operating system (*col. 7, lines 29-35*), generating a user interface based on the obtained task information (*col. 22, lines 8-13 and col. 7, lines 35-40*), the user interface displaying parameters related to the task information (*col. 7, lines 30-40*), determining loading of the operating system based on the user interface (*col. 7, lines 30-35*), and adjusting the scheduling of tasks based on the loading of the operating system, wherein the operating system includes a tool and a controller, and the tasks are processed in the controller and the user interface is generated by the tool (*col. 7, lines 38-45, col. 1, lines 47-58, col. 34, lines 53-67*).

Lee fails to explicitly teach the task information based on a system of charts. However, Dentler teaches using a system of charts to represent processing time (*see Abstract*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a system of charts to represent processing time in order to graphically display the status and other information of the processes (*see Abstract*).

24. As to claim 14, it is rejected for the same reasons as stated in the rejection of claim 5.

25. As to claim 15, it is rejected for the same reasons as stated in the rejection of claim 6.

26. As to claim 16, it is rejected for the same reasons as stated in the rejection of claim 7.

27. As to claim 17, it is rejected for the same reasons as stated in the rejection of claims 11 and 12.

28. As to claim 19, Lee fails to explicitly teach displaying time slices, tasks, and their loading. However, Dentler teaches wherein the user interface generation portion includes: a charts/slices display portion for generating information on the display relating to charts and slices and the loading of tasks on the charts and slices (*see Abstract and 8(a) and Fig. 17*), and a tasks display portion for generating information on the display relating to parameters of tasks (*see Fig. 17*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a system of charts to represent processing time, tasks and their parameters, and time slices in order to graphically display the status and other information of the processes (*see Abstract*).

29. As to claim 22, Lee fails to explicitly teach wherein the controller device includes a controller countdown timer portion, and the control systems tool includes a tool replenishment timer portion, the tool replenishment timer portion replenishing the controller countdown timer portion so long as the controller device and the control systems tool are in communication, and

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wherein the controller device sends task information to the control systems tool so long as the controller countdown timer portion is not expired. However, Dentler teaches a timer counting until it automatically updates itself (*col. 11, lines 35-50*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a controller countdown timer portion, and the control systems tool includes a tool replenishment timer portion, the tool replenishment timer portion replenishing the controller countdown timer portion so long as the controller device and the control systems tool are in communication, and wherein the controller device sends task information to the control systems tool so long as the controller countdown timer portion is not expired to the existing system because it is preferred to deal with the most up to date status of the processes (*col. 11, lines 35-50*).

30. As to claim 23, it is rejected for the same reasons as stated in the rejection of claim 4.

31. As to claim 24, it is rejected for the same reasons as stated in the rejection of claim 5.

32. As to claim 25, it is rejected for the same reasons as stated in the rejection of claims 5 and 24.

33. As to claim 26, it is rejected for the same reasons as stated in the rejection of claim 5.

34. As to claim 27, it is rejected for the same reasons as stated in the rejection of claim 6.

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35. As to claim 28, it is rejected for the same reasons as stated in the rejection of claim 7.

36. As to claim 29, it is rejected for the same reasons as stated in the rejection of claim 13. In addition, Lee fails to explicitly teach displaying time slices, tasks, and their loading. However, Dentler teaches wherein the user interface generation portion includes: a charts/slices display portion for generating information on the display relating to charts and slices and the loading of tasks on the charts and slices (*see Abstract and 8(a) and Fig. 17*), and a tasks display portion for generating information on the display relating to parameters of tasks (*see Fig. 17*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a system of charts to represent processing time, tasks and their parameters, and time slices in order to graphically display the status and other information of the processes (*see Abstract*).

37. As to claim 30, it is rejected for the same reasons as stated in the rejection of claim 22.

38. As to claim 31, it is rejected for the same reasons as stated in the rejection of claim 24.

39. As to claim 32, it is rejected for the same reasons as stated in the rejection of claim 25.

40. As to claim 33, it is rejected for the same reasons as stated in the rejection of claim 6.

41. As to claim 34, it is rejected for the same reasons as stated in the rejection of claim 7.

42. As to claim 36, it is rejected for the same reasons as stated in the rejection of claim 5.

43. As to claim 37, it is rejected for the same reasons as stated in the rejection of claim 13.

Response to Arguments

44. *Applicant argues on page 11 of the Remarks that the language “determining loading of the operating system based on the user interface” is another way of saying that a user observes the loading by looking at the information displayed by the user interface.*

In response, the Examiner respectfully disagrees. User interface interfaces between a user and a computer. The claim language does not make it explicitly clear that it is the user that is doing the determining or the observing. According to the claim language, it could equally as well be the computer.

45. *Applicant argues on page 12 of the Remarks that the amendment to claim 3 overcomes the rejection for failing to provide a structural relationship between the “processing time using a system of charts and the monitoring, scheduling, or adjusting of tasks.*

In response, the amendment to claim 3 has not overcome the rejection because there still is not a relationship established between monitoring to anything else in the claim language.

Therefore, the rejection is upheld.

46. *Applicant argues on pages 15 and 17 that Lee fails to teach or suggest the particulars of claim 1. Specifically, claim 1 recites determining loading of the operating system based on the user interface; and adjusting the scheduling of tasks based on the loading of the operating system.*

In response, the Examiner respectfully disagrees. Lee teaches determining loading of the operating system based on the user interface (*col. 7, lines 30-35*), and adjusting the scheduling of tasks based on the loading of the operating system (*col. 7, lines 38-45*). Based on the existing claim language, the claim language does not specifically limit the determining to be performed by the user. Alternatively, the computer could be performing the determining. If the user was making the determination based on the user interface, then new concerns regarding 35 USC 101 with respects to an abstract idea will arise.

47. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "the time domain inter-relationship between tasks executing in a controller" page 18) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

48. *Applicant argues on page 18 that Lee nor Dentler teach adjusting the scheduling of tasks in a particular manner.*

In response, the Examiner respectfully disagrees. Lee teaches adjusting (by being overwritten) tasks in a schedule (see Abstract, for example). In addition, new items and variables are entered into a scheduler along with a planner in order to provide scheduling (*col. 27, lines 52-67*).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MENG-AI AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100